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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,137	03/10/2004	Michael L. Leonhardt	94-045-TAX (STK 94045 PUS)	7119
51344	7590	12/08/2005	EXAMINER	
STORAGE TECHNOLOGY CORPORATION ONE STORAGE TEK DRIVE, MS-4309 LOUISVILLE, CO 80028-4309			PORTKA, GARY J	
			ART UNIT	PAPER NUMBER
			2188	

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/803,137	LEONHARDT ET AL.
	Examiner Gary J. Portka	Art Unit 2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 10 March 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-43 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-43 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 10 March 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/10/04, 4/14/04</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

1. Claims 1-43 are presented for examination.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on March 10, 2004 and June 14, 2005 were considered by the examiner.

Claim Objections

3. Claim 13 is objected to because of the following informalities: At line 4 of the claim "the attributes of the data for the particular data application" lacks clear antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-43 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for (claims 1, 32, and 33) providing desired data storage attribute irrespective of perhaps certain attributes of the physical storage devices, does not reasonably provide enablement for provided the desired attribute irrespective of physical device attributes in general, as the claim language can be broadly interpreted. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. That is, the claims recite only that the physical devices have attributes, and that the desired attribute is irrespective of

those; it is not apparent how the disclosure enables providing a desired attribute when the physical devices might have any such attributes, such as a low capacity or speed, etc. Further, paragraph 0056 implies, by citing certain storage devices that the invention supports, that there are specific attributes that must be met for the invention to function correctly. Therefore, the providing of a desired attribute is not irrespective of the physical storage attributes. Claims 2-31 and 34-43 incorporate the respective limitations of their independent claims and are rejected for the same reason.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Belsan, US Patent 5,394,532.

8. As to claim 1, Belsan discloses a data storage system for storing data for a host processor comprising a plurality of data storage devices, each having data storage attributes (certain native format attributes such as those of 5.25 drives, see col. 4 lines 26-43 and col. 14 lines 18-25), outboard storage manager presenting a virtual image of a desired attribute (control unit 101, Fig. 1, the image of the desired virtual format, see

Abstract, col. 2 lines 29-57, and col. 4 lines 50-56) by organizing the physical devices in an arrangement suitable for providing it irrespective of their attributes (since as cited at col. 4 the drives are “typically” 5.25, but not required to be so; further, claim 1 at col. 14 merely recites “native” format) such that the arrangement emulates the virtual storage image (see Abstract, col. 2 lines 18-27) and transferring data between the host and arrangement via the virtual image (clearly the purpose and indicated by Figs. 4 and 5).

9. As to claims 2-10, the virtual image of Belsan may be considered to include any of the types to the extent claimed.

10. As to claims 11-17 and 34, all limitations are disclosed or inherent to Belsan as described in the sections cited above, to the extent claimed.

11. As to claims 18-22, the types of physical storage are either disclosed in Belsan or at least notoriously well known and therefore clearly obvious to those of ordinary skill in the art.

12. As to claims 23-31 and 35-43, the limitations regarding storage levels of the physical devices are disclosed or inherent to Belsan, since levels may be interpreted as cache and disk, different disks, or ranges on a single disk.

13. Claims 1-43 are rejected under 35 U.S.C. 102(e) as being anticipated by Bakke et al, US Patent 6,330,621 B1.

The applied reference has a common assignee and inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention

disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

14. As to claim 1, Bakke discloses a data storage system for storing data for a host processor comprising a plurality of data storage devices, each having data storage attributes (Fig. 1, items 151, 152, and 153), outboard storage manager presenting a virtual image of a desired attribute (Fig. 1, 110, col. 2 lines 57-59) by organizing the physical devices in an arrangement suitable for providing it irrespective of their attributes such that the arrangement emulates the virtual storage image (see Abstract, col. 1 lines 4-11, col. 2 lines 20-32, col. 3 lines 14-50, col. 4 line 35 to col. 5 line 30) and transferring data between the host and arrangement via the virtual image (Abstract).

15. As to claims 2-10, the virtual image of Bakke may be considered to include any of the types to the extent claimed.

16. As to claims 11-17 and 34, all limitations are disclosed or inherent to Bakke as described in the sections cited above, to the extent claimed.

17. As to claims 18-22, the types of physical storage are either disclosed in Bakke or at least notoriously well known and therefore clearly obvious to those of ordinary skill in the art.

18. As to claims 23-31 and 35-43, the limitations regarding storage levels of the physical devices are disclosed or inherent to Bakke, since levels may be interpreted as cache and disk, different disks, or ranges on a single disk.

Double Patenting

19. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

20. Claims 1-43 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,094,605. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present claims are an obvious variation over those of the patent. For example, claims 1 and 32-33 of the present invention disclose a system and method comprising a manager presenting a virtual storage image by organizing physical devices in an arrangement providing a desired data storage attribute irrespective of the attributes of the devices, such that the arrangement emulates the virtual data storage image. Claims 1 and 6 of the patent are also directed to a system and method comprising a manager that presents a virtual storage image (emulate a type of data

storage device) by organizing physical devices in an arrangement irrespective of the type of device (thus clearly irrespective of attributes thereof). One of ordinary skill in the art can readily recognize that the broadest reasonable interpretation of the present claims and those of the patent encompass the same invention.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on (571) 272-4210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gary J Portka
Primary Examiner
Art Unit 2188

December 6, 2005



GARY PORTKA
PRIMARY EXAMINER